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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,452	08/19/2003	N. S. Ramesh	D-30321-01	4135

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10/02/2006

Sealed Air Corporation
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Duncan, SC 29334

EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,452

Applicant(s)

RAMESH ET AL.

Examiner

Victor S. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-33 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 6, 7, 9-11, 17, 18, 23, 24, 32 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 8, 12-16, 20-22 and 25-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Introduction

1. Applicants' amendments and remarks filed on 8/31/2006 have been entered. The amendments to specification pages 17 and 18 have been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Rejections Based on Prior Art

3. Claims 1, 5, 8, 12-16, 20-22 and 25-31 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Rauh (US 3698993) in view of McCluer et al. (US 3253947), and evidenced by Kakimoto et al. (US 4803112) for claim 5.

Rauh's invention relates to a closed cell foamed thermoplastic sound deadening sheet having distributed particulate matter of sizes ranging from 40 to 200 mesh (74-400 microns). The sheet is from 1/8 to 1/4 inch thick [abstract]. Polyethylene may be used for forming the sheet [col. 3, lines 21-23]. Preferable particles are metallix oxides, etc. [col. 3, lines 36-38], which reads on mica of instantly claimed invention. Regarding the electrically conductive particles, since they are claimed as optional, there is no requirement for the prior art to provide or account for them. Further, it should be noted that the elected filler particles of mica is inherently electrically non-conductive.

For claims 1, 8, 12-16 and 25-29, Rauh lacks a teaching of the weight law for desired sound transmission loss or attenuation. However, McCluer's invention relates to a flexible sound attenuating (deadening) material. In Fig. 1 McCluer shows the weight law of general relationships between material

weight, sound transmission loss and frequency, and teaches that based on the noise level and frequency range, various weights per square foot of the material are required to give the attenuation desired. The choice of the weight of the material product will be determined by how much transmission loss is desired or required [col. 7, lines 16-36]. It would have been obvious to one of ordinary skill in the art to modify Rauh's foam with a suitable amount of particles in the foam, i.e., the ratio between the particles and foamed thermoplastic, as taught by McCluer, motivated by the desire to obtain a desired sound transmission loss (sound attenuation) at required frequency of use.

For claim 5, Rauh teaches that preferable particles are metallic oxides, etc. [col. 3, lines 36-38], and the examiner asserts that one of ordinary skill in the art of sound attenuating material would have instantly envisaged that Rauh's metallic oxides reads on mica of instantly claimed invention, as evidenced by the reference of Kakimoto. More particularly, Kakimoto's invention relates to impact cushioning sheets. Kakimoto discloses that effective fillers for improving the sound insulating properties include inorganic powders such as mica, vermiculite, finely divided silica, etc. [col. 9, lines 29-41].

For claims 20-22, 30 and 31, Rauh is silent about the density and flexural modulus of the closed cell foamed thermoplastic sound deadening sheet. However, since Rauh in view of McCluer teaches the same subject matter (flexible sound deadening sheet material), made by the same process (extrusion), and for the same use as the instant invention, suitable inherently flexural modulus related foam density and amount of sound attenuating material of the foamed sheet product are reasonably considered to be obvious optimizations to one skilled in the art of flexible sound deadening foam sheet. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Argument

4. Applicants argue [Remarks, page 4] that the “weight law” does not appear to hold at the levels of particle loading in the foam of instant invention, because McCluer shows that at a given frequency, an increase in the area density of the sound attenuating material increases the sound transmission loss, however, Table 1 of the instant invention shows that, in Examples 1-3 and Comparative 1, the sound transmission loss (STL) at a given frequency for samples of various area densities between 38 - 61 g/ft² are about the same, as such the combination of Rauh and McCluer failed to reliably predict the performance, and cannot be an acceptable basis to arrive at the instantly claimed invention. However, a careful reading of the results in Table 1 shows that the each of Examples 1-3 are filled with different levels and different sound attenuating materials, and Comparative 1 is devoid of any sound attenuating material [left column of Table 1]. Clearly the ‘area density’ listed in Table 1 has no direct relation whatsoever to the amount of sound attenuating material per unit area in the foam, and in fact the “area density” is defined as the density of the foam divided by the average thickness of the foam, i.e., total foam mass per unit area [specification, page 3, lines 11-12]. Applicants apparently have misread their own disclosure, and there is no evidence to show that McCluer’s weight law fails to predict the performance.

Applicants argue [Remarks, page neither Rauh nor McCluer teach or suggest mica as a particle as recited in claim 8, and argues that Rauh’s teaching of sound attenuating material ‘metallic oxide’ as a genus fails to envisage ‘mica’. However, applicants are reminded that 1) neither claim 8 nor claim 1 recites mica as sound attenuating material. 2) while Rauh is silent

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about the specific species 'mica', as recited in claim 5 of instant invention, the examiner asserts that one of ordinary skill in the art would have instantly envisaged 'mica' as a suitable 'metallic oxide' sound attenuating material taught by Rauh, because in fact mica is one of the common and well known sound attenuation materials, as evidenced by the reference of Kakimoto. More particularly, Kakimoto's invention relates to impact cushioning sheets. Kakimoto discloses a long list of effective fillers for improving the sound insulating properties, and it includes inorganic powders such as mica, vermiculite, finely divided silica, etc. [col. 9, lines 29-41]. There is no reason that one skilled in the art of sound insulation would not have instantly envisaged that mica is a suitable sound attenuating material for Rauh's sound deadening sheet. Applicants' argument is unpersuasive.

Finally, applicants argue [Remarks, page 6] that the combination of Rauh and McCluer fails to teach or suggest the limitation of dependent claim 21, because Rauh would be expected to have a higher area density due to far higher particle loading taught by Rauh. However, nowhere has Rauh set a limit on the range of suitable amount of sound attenuating, and the combined teachings of Rauh and McCluer clearly provide the general conditions to obtain suitable inherently flexural modulus related foam density and amount of sound attenuating material of the sound deadening foamed sheet product, and they are reasonably considered to be obvious optimizations to one skilled in the art of flexible sound deadening foam sheet, motivated by the desire to obtain desired foam sheet flexibility and sound transmission loss (sound attenuation) at the frequency of use. Applicants' argument is unpersuasive.

Conclusion

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5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VSC
Victor S Chang
Examiner
Art Unit 1771

9/21/2006


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